REMARKS/ARGUMENTS

The Examiner is thanked for the Office Action dated August 10, 2006. The status of the application is as follows:

- Claims 1, 3, 4, 11, 13, 14, 21, and 22 stand objected to for informalities.

- Claims 1-4, 8, 10-14, 18, and 20-25 stand rejected under 35 U.S.C. 102(e) as being anticipated by Alexander et al. (US 6,177,931).

- Claims 5-7, 9, 15-17, and 19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander et al. in view of Dimitrova et al. (US 6,100,941).

The rejections and amendments to the claims are discussed below.

Claim Objections

Claims 1, 3, 4, 11, 13, 14, 21, and 22 stand objected to for minor informalities. The subject claims have been amended herein as suggested in the Office Action to cure the informalities and, thus, this object should be withdrawn.

The Anticipation Rejection

Claims 1-4, 8, 10-14, 18, and 20-25 stand rejected under 35 U.S.C. 102(e) as being anticipated by Alexander et al. (US 6,177,931). This rejection should be withdrawn because Alexander et al. does not teach each and every element as set forth in the subject claims. MPEP §2131 ("A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987)).

Independent **Claim 1** (and similarly Independent **claim 11**) is directed towards a method of processing a catalog of electronic programming information containing information, including a start time and an end time, for at least one program.

The Office Action asserts that Alexander et al. teaches obtaining from the at least one program a first value representing characteristics data of the at least one program at

the start time as recited in claim 1. FIG. 1 and column 2, line 62, to column 3, line 20, of Alexander et al. and FIG. 1 of Yuen et al. (WO9607270), which is incorporated by reference in Alexander et al., are referenced to support this assertion. In particular, the Office Action asserts that Alexander et al. teaches that the receiver 10 of Yuen et al. obtains an EPG or a schedule data packet from a television program and that this packet is equivalent to the first value representing characteristic data of the at least one program at its start time.

Contrary to this assertion, the above-referenced figures and section of Alexander et al. do not teach or suggest this claimed aspect. Rather, FIG. 1 of Alexander et al. graphically illustrates a display for an electronic program guide (EPG) within a television screen 10. As disclosed at column 2, line 62 to column 3, line 20, of Alexander et al. the EPG includes a PIP window 12 for showing video, Ad Windows 14 and 16 for displaying advertisements, and a program guide region including an action key bar 18, a navigation bar 20, a grid guide 22, and a program information box 24. The description of FIG. 1 of Yuen et al. discloses that the EPG displays television program schedules and that such schedules are obtained from a schedule of program listings of all available channels for a defined time period that is stored in a local program schedule memory 22.

Hence, the referenced sections of Alexander et al. teach displaying a television schedule within an EPG from program schedule data stored in local memory. These sections of Alexander et al. do not teach or suggest obtaining information from a television program, let alone obtaining a first value representing characteristic data of a program at its start time from the corresponding program.

The Office Action further asserts that Alexander et al. teaches storing such first value in the catalog as recited in claim 1. Column 5, lines 5-28, and column 8, lines 19-43, are referenced to support this assertion. However, column 5, lines 5-28, discloses displaying an advertisement within the EPG for a program stored in RAM so that the viewer can select the stored program to watch or record. Column 8, lines 19-43 discloses downloading program schedule data for the stored program listings and/or advertisement

to the local memory 22 or accessing such data via a direct link to Internet. Neither of these sections contemplates storing a first value obtained from a program that represents characteristic data of the program at its start time as recited in the subject claim.

The Office Action further asserts that Alexander et al. teaches obtaining from the at least one program a second value representing characteristics data of the at least one program at the end time as recited in claim 1. Column 11, lines 9-30, column 11, line 63 to column 12, line 9, and column 12, lines 30-43 of Alexander et al. are referenced to support this assertion. In contrast, these sections of Alexander et al. discuss recording and updating recording instructions based on changes in scheduled programming.

In particular, column 11, lines 9-30, of Alexander et al. teaches that a program scheduled to be recorded is not recorded if the scheduled program does not begin on time. Column 11, line 63, to column 12, line 9, of Alexander et al. discloses that the time a program is scheduled to begin to be recorded is automatically updated upon receiving a scheduling update. Column 12, lines 30-43, of Alexander et al. discloses a technique for intra-program indexing of already recorded programs based on audio content in which indexing software analyzes the audio content and a Content Analysis Program then creates a topical index for the programs based on the audio content.

Thus, Alexander et al. teaches cancelling scheduled recordings when a scheduled program does not begin on time, adjusting the time a scheduled recording begins to be recorded based on a program scheduling update, and indexing recorded programs based on audio content. However, none of these sections of Alexander et al. teach or suggest teaches obtaining a second value representing characteristics data of the at least one program at its end time from the at least one program as recited in claim 1.

The Office Action further asserts that Alexander et al. teaches storing such second value in the catalog as recited in claim 1. For the reasons discussed above regarding storing the first value, Alexander et al. does not teach or suggest storing the second value. More particularly, the referenced sections of Alexander et al. teach displaying a link to

program stored in RAM and downloading program schedule data, and does not contemplate storing such a second value obtained from the corresponding program.

The Office Action further asserts that Alexander et al. teaches that when a user selects the at least one program for a future use by a device with a program input that the first and second values are copied to the device. Column 11, lines 9-30, column 11, line 63 to column 12, line 9, and column 12, lines 30-43 of Alexander et al. are referenced to support this assertion. As discussed above, these sections of Alexander et al. teach cancelling scheduled recordings, adjusting the recording begin times of scheduled recordings, and indexing recorded programs. These sections also disclose that the programs selected for recording are selected from the scheduling information stored in local memory 22 and that selecting a program for recording instructs a recording device to record the program. However, none of these sections discloses copying such first and second values to a recording device when the user selects a program to record.

The Office Action further asserts that Alexander et al. teaches comparing the first and second values to corresponding values obtained from the program input to determine a start and stop time for the future use. Column 11, lines 9-30, column 11, line 63 to column 12, line 9, and column 12, lines 30-43 of Alexander et al. are referenced to support this assertion. These sections teach comparing a title of a program listed in the EPG that is scheduled to be recorded with a title of a telecast program and canceling the recording if the titles do not match. However, they do not teach or suggest comparing such first and second values to determine a start and stop time for future use.

Claim 8, which depends from claim 1, (and similarly **claim 18**, which depends from claim 11), recites that at least one of the first value and the second value obtained from the at least one program is generated from an audio portion from one or more frames of the at least one program. The Office Action references column 12, lines 33-43, of Alexander et al. to teach these aspects. However, column 12, lines 33-43, of Alexander et al. fails to disclose generating such values from an audio portion from one or more frames of the at least one program as recited in the subject claim. Instead, this

section of Alexander et al. teaches generating a topical index for already recorded programs based on the audio content of the programs.

Claim 10, which depends from claim 1, (and similarly **claim 20**, which depends from claim 11), recites that at least one of the first value and the second value obtained from the at least one program is obtained from low-level features. The Office Action references column 12, lines 33-43, of Alexander et al. to teach these aspects. As discussed in the preceding paragraph, this section of Alexander et al. teaches generating a topical index for already recorded programs. This section does not teach or suggest that such values representing characteristic data of a program at its start and end times are obtained from low-level features as recited in the subject claim.

Claims 2-4 and **claims 12-14** respectively depend from independent claims 1 and 11, and by virtue of their dependency, are allowable for the reasons discussed above with respect to claims 1 and 11. Therefore, the rejection of these claims should be withdrawn.

Amended independent **claim 21** recites a method of processing a catalog of electronic programming information that includes obtaining start and end times and a signature for a program selected to be recorded from the catalog, wherein the signature includes information about the start of the program and the end of the program. Claim 21 further recites that recording of an incoming signal begins when the signature of the incoming signal matches the signature of the start time within the obtained signature and that the recording is stopped when the signature of the incoming signal matches the signature of the end time within the obtained signature.

Alexander et al. does not teach or suggest such aspects. Rather, Alexander et al. discloses recording programs based on a stored program schedule. As discussed previously, Alexander et al. discloses not recording a program scheduled to be recorded if the program is preempted by another program or providing updated scheduling information to adjust the begin time of a scheduled program. Recording stops at a time based on the schedule information stored within the resident memory 22. Thus, the

system of Alexander et al. continues to record after the end of an early terminating program or stops recording before the end of a late terminating program.

Independent **claim 22** is also directed towards a system for processing a catalog of electronic programming information. Claim 22 recites that when characteristic data obtained from the catalog is equivalent to complimentary characteristic data generated from a video signal source that is monitored at a time proximal to a program start time, a logic output means is set to TRUE, and the comparison of the characteristic data is stopped. Claim 22 further recites that otherwise, the logic output means is set to FALSE, and the comparison of the characteristic data continues. The Office Action references Alexander et al. column 11, lines 9-30, column 11, line 63 to column 12, line 9, and column 12, lines 30-43 to teach these claimed aspects. However, nowhere in these sections does Alexander et al. teach or suggest setting logic to TRUE or FALSE, let alone on setting such values based on a comparison of characteristic data related program start time as recited in the subject claim.

Claim 23, which depends from claim 22, recites that when characteristic data obtained from the catalog is equivalent to complimentary characteristic data generated from the video signal source at a time proximal to a program end time, the logic output means is set to FALSE, and the comparison of the characteristic data is stopped. Claim 23 further recites that otherwise, the logic output means is set to TRUE, and the comparison of the characteristic data continues. The Office Action references Alexander et al. column 11, lines 9-30, column 11, line 63 to column 12, line 9, and column 12, lines 30-43 to teach these claimed aspects. Likewise, nowhere in these sections does Alexander et al. teach or suggest setting logic to TRUE or FALSE, let alone on setting such values based on a comparison of characteristic data related program end time as recited in the subject claim.

Claim 24, which depends from claim 22, recites that the TRUE value causes a processor to turn on a device to a channel of the program. The Office Action references Alexander et al. column 9, line 65, to column 10, line 12, column 11, lines 9-30, and

column 11, line 63, to column 12, line 9, to teach this claimed aspect. However, these sections of Alexander et al. do not teach or suggest using a logic value of TRUE to elicit the turning on of a device to a particular channel. Rather, these sections discuss terminating a scheduled recording when the program does not begin on time or updating scheduled recording with information within received schedule update data packets.

Claim 25, which depends from claim 24, recites that the FALSE value causes a processor to turn off the device. The Office Action references Alexander et al. column 9, line 65, to column 10, line 12, column 11, lines 9-30, and column 11, line 63, to column 12, line 9, to teach this claimed aspect. These sections of Alexander et al. also do not teach or suggest using a logic value of FALSE to invoke turning the device off.

In view of the above, it is respectfully requested that the rejection of **claims 1-4, 8, 10-14, 18, and 20-25** be withdrawn.

The Obviousness Rejection

Claims 5-7, 9, 15-17, and 19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander et al. in view of Dimitrova et al. (US 6,100,941). The rejection of these claims should be withdrawn for at least the following reasons.

The Office Action has failed to support an allegation that there is a suggestion or motivation to combine the references to provide a more accurate program detection system as purported in the Office Action. MPEP §2143 (To establish a *prima facie* case of obviousness, there must be some suggestion or motivation to modify the reference....); MPEP §2142 (The initial burden is on the examiner to provide a suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985)).

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In addition, the combination of Alexander et al. and Dimitrova et al. does not teach all the limitations of the subject claims. MPEP §2142 (To establish a *prima facie* case of obviousness ... the prior art references when combined must teach or suggest all the claim limitations.); *In re Royka*, 490 F.2d 981 (CCPA 1974).

In particular, **Claim 5**, which depends from claim 1, (and similarly **claim 15**, which depends from independent claim 11), recites that at least one of the first and second values is a signature generated by using a combination of features from a frame of said at least one program. The Office Action asserts that Dimitrova et al. teaches such aspects and that it would have been obvious to one of ordinary skill in the relevant art at the time of the invention to incorporate the teaching of Dimitrova et al. into the system of Alexander et al. to provide a more accurate program detection system.

As noted above, the Office Action has failed to support the allegation that there is suggestion or motivation to combine the references to provide a more accurate program detection system. In addition, Dimitrova et al. is directed towards finding commercials in programs and not values representing characteristic data of the program at start and end times that are signatures generated by using a combination of features from a frame of the program as recited in the subject claim. Thus, combining the references as suggested by the Office Action does not make up for the conceded deficiencies of Alexander et al. and, thus, does not make obvious the claimed invention.

Claim 6, which depends from claim 1, (and similarly **claim 16**, which depends from independent claim 11), recites that at least one of the first and second values is a color histogram generated by using a combination of features from a frame of said at least one program. The Office Action concedes that Alexander et al. does not teach or suggest such aspects and references Dimitrova et al., column 2, lines 10-64, and column 18, lines 1-35, to make up for this deficiency.

The Office Action states that it would have been obvious to combine these references to teach the subject claim to provide a more accurate program detection system. As noted above, the Office Action does not support the allegation that there is a

suggestion or motivation to combine the references for the purported reason. In addition, these sections of Dimitrova et al. are directed towards finding commercials in programs, and they do not teach or suggest generating values representing characteristic data of the program at its start and end times that are color histograms generated by using a combination of features from a frame of the program as recited in the subject claim.

Claim 7, which depends from claim 1, (and similarly **claim 17**, which depends from independent claim 11), that at least one of the first value and the second value is generated from closed captioning data gathered from a frame of said at least one program. The Office Action asserts that Dimitrova et al. teaches such aspects and that it would have been obvious to one of ordinary skill in the relevant art at the time of the invention to incorporate the teaching of Dimitrova et al. into the system of Alexander et al. to provide a more accurate program detection system. As noted above, the Office Action has failed to support the allegation that there is a suggestion or motivation to combine the references to provide a more accurate program detection system. In addition, the Office Action references Dimitrova et al., column 2, lines 10-64, and column 18, lines 1-35, to make up for the conceded deficiencies of Alexander et al. However, these sections of Dimitrova et al. do not teach or suggest generating values representing characteristic data of the program at its start and end times that are generated from closed captioning data gathered from a frame of the program as recited in the subject claim. As discussed above, these sections are directed towards finding commercials in programs.

Claim 9, which depends from claim 1, (and similarly **claim 19**, which depends from independent claim 11), recites that at least one of the first value and the second value is a signature generated for a block of discrete cosine values for a frame. The Office Action asserts that the combination of Alexander et al. and Dimitrova et al. teaches applicants claimed invention. As noted above, the Office Action has failed to support the allegation that there is a suggestion or motivation to combine the references as suggested in the Office Action. Furthermore, Dimitrova et al. does not teach or

suggest generating values representing characteristic data of the program at start and end times that are signatures generated for a block of discrete cosine values for a frame of the program as recited in the subject claims. In contrast, Dimitrova et al. discloses a technique for finding commercials in programs.

Claims 5-7, 9, 15-17, and 19 also depend from independent claims 1 and claim 11, and by virtue of their dependency, are allowable for the reasons discussed above with respect to claims 1 and 11.
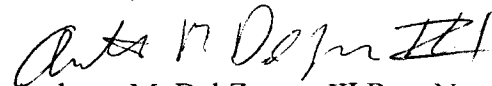
In view of the above, the rejection of **claims 5-7, 9, 15-17, and 19** should be withdrawn.

Conclusion

In view of the foregoing, it is submitted that **claims 1-25** distinguish patentably and non-obviously over the prior art of record. An early indication of allowability is earnestly solicited.

Respectfully submitted,

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